Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	700	acetylglucosaminyltransferase$ or acetylglucosamin$ transferase$ or GlcNac adj (t$1 or transferase$)	US-PGPUB; USPAT	ADJ	OFF	2005/02/22 09:34
L2	93	1 near5 (gene$1 or sequence$1)	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:34
L3	46	1 near2 "3"	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:35
L4	18	2 and 3	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:41
L5	77	1 near5 human	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:40
L6	9	5 and 3	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:41

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	700	acetylglucosaminyltransferase$ or acetylglucosamin$ transferase$ or GlcNac adj (t$1 or transferase$)	US-PGPUB; USPAT	ADJ	OFF	2005/02/22 09:34
L2	93	1 near5 (gene$1 or sequence$1)	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:34
L3	46	1 near2 "3"	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:35
L4	18	2 and 3	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:35

PGPUB-DOCUMENT-NUMBER: 20050003478

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050003478 A1

TITLE: Process for producing beta-1, 3-n-acetylglucosamine transferase and n-acetylglucosamine- containing composite saccharide

PUBLICATION-DATE: January 6, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Endo, Tetsuo	Palo Alto	CA	US	
Koizumi, Satoshi	Yokohama-shi		JP	

APPL-NO: 10/ 493493

DATE FILED: April 22, 2004

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	2001-329288	2001JP-2001-329288	October 26, 2001

PCT-DATA:
APPL-NO: PCT/JP02/11111
DATE-FILED: Oct 10, 2002
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 435/69.1, 435/193 , 435/252.3 , 435/320.1 , 536/23.2

ABSTRACT:

The present invention can provide a process for producing a protein having .beta.1,3-N-acetylglucosaminyltransferase activity using a transformant comprising a DNA encoding a protein having .beta.1,3-N-acetylglucosaminyl-transferase activity derived from a microorganism belonging to the genus Pasteurella and a process for producing an N-acetylglucosamine-containing complex carbohydrate using a transformant capable of producing a protein having .beta.1,3-N-acetylglucosaminyltransferase activity derived from a microorganism.

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Title - TTL (1):
Process for producing beta-1, 3-n-acetylglucosamine transferase and n-acetylglucosamine- containing composite saccharide

Summary of Invention Paragraph - BSTX (4):
[0002] As .beta.1,3-N-acetylglucosaminyltransferase and its genes, genes derived from animals [Proc. Natl. Acad. Sci. U.S.A., 96, 406 (1999), J. Biol. Chem., 276, 3498 (2001)] and the like have been obtained. However,

there is no example in which the .beta.1,3-N-acetylglucosaminyltransferas- e derived from an animal was expressed in a microorganism, such as Escherichia coli, as a protein having activity.

Summary of Invention Paragraph - BSTX (5):
[0003] On the other hand, in the case of microorganisms, there is a report in which a gene encoding the .beta.1,3-N-acetylglucosaminyltransferase was obtained from a microorganism belonging to the genus Neisseria and the .beta.1,3-N-acetylglucosaminyltransferase was expressed in Escherichia coli using the gene [Carbohydr. Res., 328, 3 (2000); Glycobiology, 9, 1061 (1999)]. However, there is no report in which the gene is obtained from a microorganism belonging to the genus Pasteurella.

Summary of Invention Paragraph - BSTX (6):
[0004] Also, all nucleotide sequences of the genomic DNA in Pasteurella multocida PM70 have been determined [Proc. Natl. Acad. Sci. USA, 98, 3460 (2001)], and it has been suggested that pm0511 gene is a gene encoding glycosyltransferase by homology search and the like (http://www.cbc.umn.edu/ResearchProjects/Pm/pmhome.html). However, there is no report that the gene product has .beta.1,3-N-acetylglucosaminyltran- sferase activity.

Summary of Invention Paragraph - BSTX (18):
[0015] (9) The process according to (6), wherein the DNA encoding the protein having .beta.1,3-N-acetylglucosaminyltransferase activity is a DNA comprising the nucleotide sequence represented by SEQ ID NO:2.

Summary of Invention Paragraph - BSTX (33):
[0030] (24) The process according to (21), wherein the DNA encoding the protein having .beta.1,3-N-acetylglucosaminyltransferase activity is a DNA comprising the nucleotide sequence represented by SEQ ID NO:2.

Summary of Invention Paragraph - BSTX (35):
[0032] (26) A protein having .beta.1,3-N-acetylglucosaminyltransferase activity, which comprises the amino acid sequence represented by SEQ ID NO:1.

Summary of Invention Paragraph - BSTX (70):
[0067] The full nucleotide sequence of the genomic DNA in Pasteurella multocida PM70 was determined [Proc. Natl. Acad. Sci., USA, 98, 3460 (2001)], and the DNA encoding the protein having .beta.1,3-N-acetylglucos- aminyltransferase activity can be selected by carrying out gene search, homology search and the like by using, as a query, a known .beta.1,3-N-acetylglucosaminyltransferase gene based on the nucleotide sequence database of the genomic DNA [http://www.cbc.umn.edu/ResearchProj- ects/Pm/pmhome.html, http://www.ncbi.nlm.nih.gov/BLAST/].

Summary of Invention Paragraph - BSTX (143):
[0140] Moreover, the protein having .beta.1,3-N-acetylglucosaminyltransfer- ase activity can be produced by rediferentiating a gene-introduced animal or plant cell to develop a gene-introduced transgenic animal individual (transgenic nonhuman animal) or plant individual (transgenic plant), and using the individual.

Brief Description of Drawings Paragraph - DRTX (2):
[0166] FIG. 1 shows construction steps of .beta.1,3-N-acetylglucosaminyltr- ansferase gene expression plsmid pGT124. In the drawing, Amp.sup.r represents an ampicillin-resistant gene; P.sub.trp represents tryptophane promoter; and pm0511 represents a gene encoding an .beta.1,3-N-acetylglucosaminyltransferase.

Detail Description Paragraph - DETX (3):
Construction of a Strain Expressing a .beta.1,3-N-acetylglucosaminyltransferase Gene Derived from Pasteurella multocida

Claims Text - CLTX (9):
9. The process according to claim 6, wherein the DNA encoding the protein having .beta.1,3-N-acetylglucosaminyltransferase activity is a DNA comprising the nucleotide sequence represented by SEQ ID NO:2.

Claims Text - CLTX (24):
24. The process according to claim 21, wherein the DNA encoding the protein having .beta.1,3-N-acetylglucosaminyltransferase activity is a DNA comprising the nucleotide sequence represented by SEQ ID NO:2.

Claims Text - CLTX (26):
26. A protein having .beta.1,3-N-acetylglucosaminyltransferase activity, which comprises the amino acid sequence represented by SEQ ID NO:1.

PGPUB-DOCUMENT-NUMBER: 20040230042

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040230042 A1

TITLE: Expression of class 2 mannosidase and class III mannosidase in lower eukaryotic cells

PUBLICATION-DATE: November 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Hamilton, Stephen	Enfield	NH	US	

APPL-NO: 10/ 616082

DATE FILED: July 8, 2003

RELATED-US-APPL-DATA:

child 10616082 A1 20030708

parent continuation-in-part-of 10371877 20030220 US PENDING

child 10371877 20030220 US

parent continuation-in-part-of 09892591 20010627 US PENDING

child 10616082 A1 20030708

parent continuation-in-part-of PCT/US02/41510 20021224 US PENDING

non-provisional-of-provisional 60214358 20000628 US

non-provisional-of-provisional 60215638 20000630 US

non-provisional-of-provisional 60279997 20010330 US

non-provisional-of-provisional 60344169 20011227 US

US-CL-CURRENT: 530/395, 435/254.2 , 435/471 , 435/69.1 , 536/23.5

ABSTRACT:

A method for producing human-like glycoproteins by expressing a Class 2 .alpha.-mannosidase having a substrate specificity for Man.alpha.1,3 and Man.alpha.1,6 glycosidic linkages in a lower eukaryote is disclosed. Hydrolysis of these linkages on oligosaccharides produces substrates for further N-glycan processing in the secretory pathway.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. application Ser. No. 10/371,877, filed on Feb. 20, 2003, which is a continuation-in-part of U.S. application Ser. No. 09/892,591, filed Jun. 27, 2001, which claims the benefit under 35 U.S.C. .sctn.119(e) of U.S. Provisional Application No. 60/214,358, filed Jun. 28, 2000, U.S. Provisional Application No. 60/215,638,

filed Jun. 30, 2000, and U.S. Provisional Application No. 60/279,997, filed Mar. 30, 2001, each of which is incorporated herein by reference in its entirety.

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Detail Description Paragraph - DETX (570):
[0687] Examples of modifications to glycosylation which can be affected using a method according to this embodiment of the invention are: (1) engineering a eukaryotic host cell to trim mannose residues from Man.sub.8GlcNAc.sub.2 to yield a Man.sub.5GlcNAc.sub.2 N-glycan; (2) engineering eukaryotic host cell to add an N-acetylglucosamine (GlcNAc) residue to Man.sub.5GlcNAc.sub.2 by action of GlcNAc transferase 1; (3) engineering a eukaryotic host cell to functionally express an enzyme such as an N-acetylglucosaminyl Transferase (GnTI, GnTII, GnTIII, GnTIV, GnTV, GnTVI), mannosidase II, fucosyltransferase (FT), galactosyl tranferase (GalT) or a sialyltransferase (ST).

Detail Description Paragraph - DETX (636):
[0737] GlcNAc Transferase I activity is required for the maturation of complex and hybrid N-glycans (U.S. Pat. No. 5,834,251). Man.sub.5GlcNAc.sub.2 may only be trimmed by mannosidase II, a necessary step in the formation of human glycoforms, after the addition of N-acetylglucosamine to the terminal .alpha.-1,3 mannose residue of the trimannose stem by GlcNAc Transferase I (Schachter, 1991 Glycobiology 1(5):453-461). Accordingly, a combinatorial DNA library was prepared including DNA fragments encoding suitably targeted catalytic domains of GlcNAc Transferase I genes from C. elegans and Homo sapiens; and localization sequences from GLS, MNS, SEC, MNN9, VAN1, ANP1, HOC1, MNN10, MNN11, MNT1, KTR1, KTR2, MNN2, MNN5, YUR1, MNN1, and MNN6 from S.cerevisiae and P.pastoris putative .alpha.-1,2-mannosyltransferases based on the homology from S.cerevisiae: D2, D9 and J3, which are KTR homologs. Table 10 includes but does not limit targeting peptide sequences such as SEC and OCH1, from P.pastoris and K.lactis GnTI, (See Table 6 and Table 10).

Detail Description Paragraph - DETX (638):
[0739] A portion of the gene encoding human N-acetylglucosaminyl Transferase] (MGATI, Accession# NM002406), lacking the first 154 bp, was amplified by PCR using oligonucleotides 5'-TGGCAGGCGCGCCTCAGTCAGCGCTCTCG-- 3' (SEQ ID NO: 43) and 5'-AGGTTAATTA AGTGCTAATTCCAGCTAGG-3' (SEQ ID NO: 44) and vector pHG4.5 (ATCC# 79003) as template. The resulting PCR product was cloned into pCR2.1-TOPO and the correct sequence was confirmed. Following digestion with AscI and PacI the truncated GnTI was inserted into plasmid pJN346 to create pNA. After digestion of pJN271 with NotI and AscI, the 120 bp insert was ligated into pNA to generate an in-frame fusion of the MNN9 transmembrane domain with the GnTI, creating pNA 15.

PGPUB-DOCUMENT-NUMBER: 20040203111

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040203111 A1

TITLE: UDP-N-acetylglucosamine: galactose-B1,3-N-acetylgalactosamine-a-R/ (GlcNAc to GalNAc) B1-6 N- acetylglucosaminyltransferase, C2GnT3

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Schwientek, Tilo	Bronshoj		DK	
Clausen, Henrik	Holte		DK	

APPL-NO: 10/ 843723

DATE FILED: May 11, 2004

RELATED-US-APPL-DATA:

child 10843723 A1 20040511

parent continuation-of 10084406 20020225 US PENDING

child 10084406 20020225 US

parent division-of 09645192 20000824 US GRANTED

parent-patent 6635461 US

non-provisional-of-provisional 60150488 19990824 US

US-CL-CURRENT: 435/69.1, 435/193 , 435/320.1 , 435/325 , 536/23.2

ABSTRACT:

A novel gene defining a novel human UDP-GlcNAc: Gal.beta.1-3GalNAc.alpha..-beta.1,6GlcNAc-transferase, termed C2GnT3, with unique enzymatic properties is disclosed. The enzymatic activity of C2GnT3 is shown to be distinct from that of previously identified enzymes of this gene family. The invention discloses isolated DNA molecules and DNA constructs encoding C2GnT3 and derivatives thereof by way of amino acid deletion, substitution or insertion exhibiting C2GnT3 activity, as well as cloning and expression vectors including such DNA, cells transfected with the vectors, and recombinant methods for providing C2GnT3. The enzyme C2GnT3 and C2GnT3-active derivatives thereof are disclosed, in particular soluble derivatives comprising the catalytically active domain of C2GnT3. Further, the invention discloses methods of obtaining 1,6-N-acetylglucosaminyl glycosylated saccharides, glycopeptides or glycoproteins by use of an enzymically active C2GnT3 protein or fusion protein thereof or by using cells stably transfected with a vector including DNA encoding an enzymatically active C2GnT3 protein as an expression system for recombinant production of such glycopeptides or glycoproteins. Methods are disclosed for the identification of agents with the ability to inhibit or stimulate the biological activity of C2GnT3. Furthermore, methods of using C2GnT3 in the structure-based design of inhibitors or stimulators thereof are

also disclosed in the invention. Also a method for the identification of DNA sequence variations in the C2GnT3 gene by isolating DNA from a patient, amplifying C2GnT3-coding exons by PCR, and detecting the presence of DNA sequence variation, are disclosed.

[0001] This application is a continuation of U.S. Ser. No. 10/084,406, filed Feb. 25, 2002, which is a divisional of U.S. Ser. No. 09/645,192, filed Aug. 24, 2000, now U.S. Pat. No. 6,635,461, issued Oct. 21, 2003, which claims priority to U.S. Ser. No. 60/150,488, filed Aug. 24, 1999. Each of these prior applications is incorporated by reference in its entirety.

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Summary of Invention Paragraph - BSTX (10):
[0009] Consequently, there exists a need in the art for detecting as yet unidentified UDP-N-acetylglucosamine: Galactose-.beta.1,3-N-acetylgalacto-samine-.alpha.-R (GlcNAc to GalNAc) .beta.1-6 N-acetylglucosaminyltransfer-ases and identifying the primary structures of the genes encoding such enzymes. The present invention meets this need, and further presents other related advantages.

Summary of Invention Paragraph - BSTX (12):
[0010] The present invention provides isolated nucleic acids encoding human UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyltransferase 3 (C2GnT3), including cDNA and genomic DNA. C2GnT3 has acceptor substrate specificities comparable to C2GnT1 (14). The complete nucleotide sequence encoding C2GnT3 is set forth in SEQ ID NO: 1 and in FIG. 1.

Detail Description Paragraph - DETX (17):
[0049] The present invention provides the isolated DNA molecules, including genomic DNA and cDNA, encoding the UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyl-transferase 3 (C2GnT3).

Detail Description Paragraph - DETX (182):
[0208] 22. Bierhuizen, M. F., Maemura, K., Kudo, S., and Fukuda, M. Genomic organization of core 2 and I branching beta-1,6-N-acetylglucosami-nyltransferases. Implication for evolution of the beta-1,6-N-acetylglucosaminyltransferase gene family. Glycobiology 5: 417-425, 1995.

PGPUB-DOCUMENT-NUMBER: 20040203092

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040203092 A1

TITLE:
UDP-N-acetylglucosamine:galactose-beta1,3-N-acetylgalacto samine-alpha-R/ (GlcNAc to GalNAc) beta1-6 N-acetylglucosaminyltransferase, C2GnT3

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Schwientek, Tilo	Bronshoj		DK	
Clausen, Henrik	Holte		DK	

APPL-NO: 10/ 843962

DATE FILED: May 11, 2004

RELATED-US-APPL-DATA:

child 10843962 A1 20040511

parent division-of 10084406 20020225 US PENDING

child 10084406 20020225 US

parent division-of 09645192 20000824 US GRANTED

parent-patent 6635461 US

non-provisional-of-provisional 60150488 19990824 US

US-CL-CURRENT: 435/68.1, 435/101 , 435/89

ABSTRACT:

A novel gene defining a novel human UDP-GlcNAc: Gal.beta.1-3GalNAca .beta.1,6GlcNAc-transferase, termed C2GnT3, with unique enzymatic properties is disclosed. The enzymatic activity of C2GnT3 is shown to be distinct from that of previously identified enzymes of this gene family. The invention discloses isolated DNA molecules and DNA constructs encoding C2GnT3 and derivatives thereof by way of amino acid deletion, substitution or insertion exhibiting C2GnT3 activity, as well as cloning and expression vectors including such DNA, cells transfected with the vectors, and recombinant methods for providing C2GnT3. The enzyme C2GnT3 and C2GnT3-active derivatives thereof are disclosed, in particular soluble derivatives comprising the catalytically active domain of C2GnT3. Further, the invention discloses methods of obtaining 1,6-N-acetylglucosaminyl glycosylated saccharides, glycopeptides or glycoproteins by use of an enzymically active C2GnT3 protein or fusion protein thereof or by using cells stably transfected with a vector including DNA encoding an enzymatically active C2GnT3 protein as an expression system for recombinant production of such glycopeptides or glycoproteins. Methods are disclosed for the identification of agents with the ability to inhibit or stimulate the biological activity of C2GnT3. Furthermore, methods of using

C2GnT3 in the structure-based design of inhibitors or stimulators thereof are also disclosed in the invention. Also a method for the identification of DNA sequence variations in the C2GnT3 gene by isolating DNA from a patient, amplifying C2GnT3-coding exons by PCR, and detecting the presence of DNA sequence variation, are disclosed.

[0001] This application is a divisional of U.S. Ser. No. 10/084,406, filed Feb. 25, 2002, which is a divisional of U.S. Ser. No. 09/645,192, filed Aug. 24, 2000, now U.S. Pat. No. 6,635,461, issued Oct. 21, 2003, which claims priority to U.S. Ser. No. 60/150,488, filed Aug. 24, 1999. Each of these prior applications is incorporated by reference in its entirety.

---------- KWIC --------

Summary of Invention Paragraph - BSTX (10):
[0009] Consequently, there exists a need in the art for detecting as yet unidentified UDP-N-acetylglucosamine: Galactose-.beta.1,3-N-acetylgalacto-samine-.alpha.-R (GlcNAc to GalNAc) .beta.1-6 N-acetylglucosaminyltransfer-ases and identifying the primary structures of the genes encoding such enzymes. The present invention meets this need, and further presents other related advantages.

Summary of Invention Paragraph - BSTX (12):
[0010] The present invention provides isolated nucleic acids encoding human UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyltransferase 3 (C2GnT3), including cDNA and genomic DNA. C2GnT3 has acceptor substrate specificities comparable to C2GnT1 (14). The complete nucleotide sequence encoding C2GnT3 is set forth in SEQ ID NO: 1 and in FIG. 1.

Detail Description Paragraph - DETX (17):
[0047] The present invention provides the isolated DNA molecules, including genomic DNA and cDNA, encoding the UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyl-transferase 3 (C2GnT3).

Detail Description Paragraph - DETX (181):
[0189] 22. Bierhuizen, M. F., Maemura, K., Kudo, S., and Fukuda, M. Genomic organization of core 2 and I branching beta-1,6-N-acetylglucosami-nyltransferases. Implication for evolution of the beta-1,6-N-acetylglucosa-minyltransferase gene family. Glycobiology 5: 417-425, 1995.

US-PAT-NO: 6794169

DOCUMENT-IDENTIFIER: US 6794169 B2

TITLE: UDP-N-acetylglucosamine: galactose-.beta.1,3-N-acetylgalactosamine-.alpha.-R / (GlcNAc to GalNAc) .beta.1,6-N-acetylglucosaminyltransferase, C2GnT3

DATE-ISSUED: September 21, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schwientek; Tilo	Br.o slashed.nsh.o	N/A	N/A	DK
Clausen; Henrik	slashed.j Holte	N/A	N/A	DK

APPL-NO: 10/ 084406

DATE FILED: February 25, 2002

PARENT-CASE:

This application is a divisional of U.S. Ser. No. 09/645/192, filed Aug. 24, 2000, now U.S. Pat. No. 6,635,461, issued Oct. 21, 2003, which claims priority to U.S. Serial No. 60/150,488 filed Aug. 24, 1999, now abandoned. Each of these prior applications is incorporated by reference in its entirety.

US-CL-CURRENT: 435/193, 435/252.3 , 435/320.1 , 435/325 , 435/6 , 530/350

ABSTRACT:

A novel gene defining a novel human UDP-GlcNAc: Gal.beta.1-3GalNAc.alpha. .beta.1,6GlcNAc-transferase, termed C2GnT3, with unique enzymatic properties is disclosed. The enzymatic activity of C2GnT3 is shown to be distinct from that of previously identified enzymes of this gene family. The invention discloses isolated DNA molecules and DNA constructs encoding C2GnT3 and derivatives thereof by way of amino acid deletion, substitution or insertion exhibiting C2GnT3 activity, as well as cloning and expression vectors including such DNA, cells transfected with the vectors, and recombinant methods for providing C2GnT3. The enzyme C2GnT3 and C2GnT3-active derivatives thereof are disclosed, in particular soluble derivatives comprising the catalytically active domain of C2GnT3. Further, the invention discloses methods of obtaining 1,6-N-acetylglucosaminyl glycosylated saccharides, glycopeptides or glycoproteins by use of an enzymically active C2GnT3 protein or fusion protein thereof or by using cells stably transfected with a vector including DNA encoding an enzymatically active C2GnT3 protein as an expression system for recombinant production of such glycopeptides or glycoproteins. Methods are disclosed for the identification of agents with the ability to inhibit or stimulate the biological activity of C2GnT3. Furthermore, methods of using C2GnT3 in the structure-based design of inhibitors or stimulators thereof are also disclosed in the invention. Also a method for the identification of DNA sequence variations in the C2GnT3 gene by isolating DNA from a patient, amplifying C2GnT3-coding exons by PCR, and detecting the presence of DNA sequence variation, are disclosed.

10 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

---------- KWIC --------

Brief Summary Text - BSTX (10):
Consequently, there exists a need in the art for detecting as yet unidentified UDP-N-acetylglucosamine: Galactose-.beta.1,3-N-acetylgalactosamine-.alpha.-R (GlcNAc to GalNAc) .beta.1-6 N-acetylglucosaminyltransferases and identifying the primary structures of the genes encoding such enzymes. The present invention meets this need, and further presents other related advantages.

Brief Summary Text - BSTX (12):
The present invention provides isolated nucleic acids encoding human UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyltransferase 3 (C2GnT3), including cDNA and genomic DNA. C2GnT3 has acceptor substrate specificities comparable to C2GnT1 (14). The complete nucleotide sequence encoding C2GnT3 is set forth in SEQ ID NO: 1 and in FIG. 1.

Detailed Description Text - DETX (6):
The present invention provides the isolated DNA molecules, including genomic DNA and cDNA, encoding the UDP-N-acetylglucosamine: N-acetylgalactosamine .beta.1,6 N-acetylglucosaminyltransferase 3 (C2GnT3).

Detailed Description Text - DETX (149):
References 1. Clausen, H. and Bennett, E. P. A family of UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferases control the initiation of mucin-type O-linked glycosylation. Glycobiology 6: 635-646, 1996. 2. Piller, F., Piller, V., Fox, R. I., and Fukuda, M. Human T-lymphocyte activation is associated with changes in O-glycan biosynthesis. J. Biol. Chem. 263: 15146-15150, 1988. 3. Yang, J. M., Byrd, J. C., Siddiki, B. B., Chung, Y. S., Okuno, M., Sowa, M., Kim, Y. S., Matta, K. L., and Brockhausen, I. Alterations of O-glycan biosynthesis in human colon cancer tissues. Glycobiology 4: 873-884, 1994. 4. Yousefi, S., Higgins, E., Daoling, Z., Pollex-Kruger, A., Hindsgaul, O., and Dennis, J. W. Increased UDP-GlcNAc:Gal beta 1-3GalNAc-R (GlcNAc to GalNAc) beta-1, 6-N-acetylglucosaminyltransferase activity in metastatic murine tumor cell lines. Control of polylactosamine synthesis. J. Biol. Chem. 266: 1772-1782, 1991. 5. Fukuda, M. Possible roles of tumor-associated carbohydrate antigens. Cancer Res. 56: 2237-2244, 1996. 6. Brockhausen, I., Yang, J. M., Burchell, J., Whitehouse, C., and Taylor-Papadimitriou, J. Mechanisms underlying aberrant glycosylation of MUC1 mucin in breast cancer cells. Eur. J. Biochem. 233: 607-617, 1995. 7. Brockhausen, I., Kuhns, W., Schachter, H., Matta, K. L., Sutherland, D. R., and Baker, M. A. Biosynthesis of O-glycans in leukocytes from normal donors and from patients with leukemia: increase in O-glycan core 2 UDP-GlcNAc:Gal beta 3 GalNAc alpha-R (GlcNAc to GalNAc) beta(1-6)-N-acetylglucosaminyltransferase in leukemic cells. Cancer Res. 51: 1257-1263, 1991. 8. Higgins, E. A., Siminovitch, K. A., Zhuang, D. L., Brockhausen, I., and Dennis, J. W. Aberrant O-linked oligosaccharide biosynthesis in lymphocytes and platelets from patients with the Wiskott-Aldrich syndrome. J. Biol. Chem. 266: 6280-6290, 1991. 9. Saitoh, O., Piller, F., Fox, R. I., and Fukuda, M. T-lymphocytic leukemia expresses complex, branched O-linked oligosaccharides on a major sialoglycoprotein, leukosialin. Blood 77: 1491-1499, 1991. 10. Springer, G. F. T and Tn, general carcinoma autoantigens. Science 224: 1198-1206, 1984.

11. Kumar, R., Camphausen, R. T., Sullivan, F. X., and Cumming, D. A. Core2 beta-1,6-N-acetylglucosaminyltransferase enzyme activity is critical for P-selectin glycoprotein ligand-1 binding to P-selectin. Blood 88: 3872-3879, 1996. 12. Williams, D. and Schachter, H. Mucin synthesis. I. Detection in canine submaxillary glands of an N- acetylglucosaminyltransferase which acts on mucin substrates. J. Biol. Chem. 255: 11247-11252, 1980. 13. Bierhuizen, M. F. and Fukuda, M. Expression cloning of a cDNA encoding UDP-GlcNAc:Gal beta 1-3-GalNAc-R (GlcNAc to GalNAc) beta 1-6GlcNAc transferase by gene transfer into CHO cells expressing polyoma large tumor antigen. Proc. Natl. Acad. Sci. U.S.A. 89: 9326-9330, 1992. 14. Schwientek, T., Yeh, J. C., Levery, S. B., Keck, B., Merkx, G., van Kessel, A. G., Fukuda, M., and Clausen, H. Control of O-glycan branch formation. Molecular cloning and characterization of a novel thymus-associated core 2 betal, 6-n-acetylglucosaminyltransferase. J. Biol. Chem. 275: 11106-11113, 2000. 15. Schwientek, T., Nomoto, M., Levery, S. B., Merkx, G., van Kessel, A. G., Bennett, E. P., Hollingsworth, M. A., and Clausen, H. Control of O-glycan branch formation. Molecular cloning of human cDNA encoding a novel betal,6-N-acetylglucosaminyltransferase forming core 2 and core 4. J. Biol. Chem. 274: 4504-4512, 1999. 16. Yeh, J. C., Ong, E., and Fukuda, M. Molecular cloning and expression of a novel beta-1, 6-N-acetylglucosaminyltransferase that forms core 2, core 4, and I branches. J. Biol. Chem. 274: 3215-3221, 1999. 17. Baum, L. G., Pang, M., Perillo, N. L., Wu, T., Delegeane, A., Uittenbogaart, C. H., Fukuda, M., and Seilhamer, J. J. Human thymic epithelial cells express an endogenous lectin, galectin-1, which binds to core 2 O-glycans on thymocytes and T lymphoblastoid cells. J. Exp. Med. 181: 877-887, 1995. 18. Perillo, N. L., Marcus, M. E., and Baum, L. G. Galectins: versatile modulators of cell adhesion, cell proliferation, and cell death. J. Mol. Med. 76: 402-412, 1998. 19. Perillo, N. L., Pace, K. E., Seilhamer, J. J., and Baum, L. G. Apoptosis of T cells mediated by galectin-1. Nature 378: 736-739, 1995. 20. Devereux, J., Haeberli, P., and Smithies, O. A comprehensive set of sequence analysis programs for the VAX. Nucleic Acids Res. 12: 387-395, 1984 21. Altschul, S. F., Gish, W., Miller, W., Myers, E. W., and Lipman, D. J. Basic local alignment search tool. J. Mol. Biol. 1990, Oct. 5., 215: 403-410, 22. Bierhuizen, M. F., Maemura, K., Kudo, S., and Fukuda, M. Genomic organization of core 2 and I branching beta-1,6-N-acetylglucosaminyltransferases. Implication for evolution of the beta-1,6-N-acetylglucosaminyltransferase gene family. Glycobiology 5: 417-425, 1995. 23. Almeida, R., Amado, M., David, L., Levery, S. B., Holmes, E. H., Merkx, G., van Kessel, A. G., Rygaard, E., Hassan, H., Bennett, E., and Clausen, H. A family of human beta4-galactosyltransferases. Cloning and expression of two novel UDP-galactose: beta-N-acetylglucosamine beta1,4-galactosyltransferases, beta4Gal-T2 and beta4Gal-T3. J. Biol. Chem. 272: 31979-31991, 1997. 24. Bennett, E. P., Hassan, H., and Clausen, H. cDNA cloning and expression of a novel human UDP-N-acetyl-alpha-D- galactosamine. Polypeptide N-acetylgalactosaminyltransferase, GalNAc-T3. J. Biol. Chem. 271: 17006-17012, 1996. 25. Wandall, H. H., Hassan, H., Mirgorodskaya, E., Kristensen, A. K., Roepstorff, P., Bennett, E. P., Nielsen, P. A., Hollingsworth, M. A., Burchell, J., Taylor-Papadimitriou, J., and Clausen, H. Substrate specificities of three members of the human UDP-N-acetyl-alpha-D-galactosamine: Polypeptide N-acetylgalactosaminyltransferase family, GalNAc-T1, -T2, and -T3. J. Biol. Chem. 272: 23503-23514, 1997. 26. Matteucci, M. D. and Caruthers, M. H. J. Am. Chem. Soc. 103: 3185-3191. 1981. 27. Yoo, Y., Rote, K., and Rechsteiner, M. Synthesis of peptides as cloned ubiquitin extensions. J. Biol. Chem. 264: 17078-17083, 1989.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	700	acetylglucosaminyltransferase$ or acetylglucosamin$ transferase$ or GlcNac adj (t$1 or transferase$)	US-PGPUB; USPAT	ADJ	OFF	2005/02/22 09:34
L2	93	1 near5 (gene$1 or sequence$1)	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:34
L3	46	1 near2 "3"	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:35
L4	18	2 and 3	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:41
L5	77	1 near5 human	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:40
L6	9	5 and 3	US-PGPUB; USPAT	OR	OFF	2005/02/22 09:41

PGPUB-DOCUMENT-NUMBER: 20040265807

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040265807 A1

TITLE: Enzymes

PUBLICATION-DATE: December 30, 2004

INVENTOR-INFORMATION:

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APPL-NO: 10/ 467903

DATE FILED: March 8, 2004

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60268113 20010209 US

non-provisional-of-provisional 60269215 20010215 US

non-provisional-of-provisional 60272271 20010227 US

non-provisional-of-provisional 60274091 20010307 US

non-provisional-of-provisional 60274423 20010309 US

non-provisional-of-provisional 60278480 20010323 US

non-provisional-of-provisional 60278479 20010323 US

PCT-DATA:
APPL-NO: PCT/US02/03814
DATE-FILED: Feb 8, 2002
PUB-NO:
PUB-DATE:

371-DATE:
102(E)-DATE:

US-CL-CURRENT: 435/6, 435/183 , 435/320.1 , 435/325 , 435/69.1 , 536/23.2

ABSTRACT:

The invention provides human enzymes (NZMS) and polynucleotides which identify and encode NZMS. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with aberrant expression of NZMS.

---------- KWIC --------

Detail Description Paragraph - DETX (100):
[0241] As another example, SEQ ID NO:4 is 55% identical, from residue Q44 to residue C377, to human beta-1,3-N-acetylglucosaminyltransferase bGnT-3 (GenBank ID g12619296) as determined by the Basic Local Alignment Search Tool (BLAST). (See Table 2.) The BLAST probability score is 7.14e-94, which indicates the probability of obtaining the observed polypeptide sequence alignment by chance. SEQ ID NO:4 also contains a glycosyltransferase domain as determined by searching for statistically significant matches in the hidden Markov model (HMM)-based PFAM database of conserved protein family domains. (See Table 3.)

PGPUB-DOCUMENT-NUMBER: 20040230042

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040230042 A1

TITLE: Expression of class 2 mannosidase and class III mannosidase in lower eukaryotic cells

PUBLICATION-DATE: November 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 10/ 616082

DATE FILED: July 8, 2003

RELATED-US-APPL-DATA:

child 10616082 A1 20030708

parent continuation-in-part-of 10371877 20030220 US PENDING

child 10371877 20030220 US

parent continuation-in-part-of 09892591 20010627 US PENDING

child 10616082 A1 20030708

parent continuation-in-part-of PCT/US02/41510 20021224 US PENDING

non-provisional-of-provisional 60214358 20000628 US

non-provisional-of-provisional 60215638 20000630 US

non-provisional-of-provisional 60279997 20010330 US

non-provisional-of-provisional 60344169 20011227 US

US-CL-CURRENT: 530/395, 435/254.2 , 435/471 , 435/69.1 , 536/23.5

ABSTRACT:

A method for producing human-like glycoproteins by expressing a Class 2 .alpha.-mannosidase having a substrate specificity for Man.alpha.1,3 and Man.alpha.1,6 glycosidic linkages in a lower eukaryote is disclosed. Hydrolysis of these linkages on oligosaccharides produces substrates for further N-glycan processing in the secretory pathway.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of U.S. application Ser. No. 10/371,877, filed on Feb. 20, 2003, which is a continuation-in-part of U.S. application Ser. No. 09/892,591, filed Jun. 27, 2001, which claims the benefit under 35 U.S.C. .sctn.119(e) of U.S. Provisional Application No. 60/214,358, filed Jun. 28, 2000, U.S. Provisional Application No. 60/215,638,

filed Jun. 30, 2000, and U.S. Provisional Application No. 60/279,997, filed Mar. 30, 2001, each of which is incorporated herein by reference in its entirety.

---------- KWIC --------

Summary of Invention Paragraph - BSTX (29):
[0028] Japanese Patent Application Publication No. 8-336387 discloses the deletion of an OCH1 homolog in Pichia pastoris. In S.cerevisiae, OCH1 encodes a 1,6-mannosyltransferase, which adds a mannose to the glycan structure Man.sub.8GlcNAc.sub.2 to yield Man.sub.9GlcNAc.sub.2. The Man.sub.9GlcNAc.sub.2 structure, which contains three 1,6 mannose residues, is then a substrate for further 1,2-, 1,6-, and 1,3-mannosyltransferases in vivo, leading to the hypermannosylated glycoproteins that are characteristic for S.cerevisiae and which typically may have 30-40 mannose residues per N-glycan. Because the Och1p initiates the transfer of 1,6 mannose to the Man.sub.8GlcNAc.sub.2 core, it is often referred to as the "initiating 1,6 mannosyltransferase" to distinguish it from other 1,6 mannosyltransferases acting later in the Golgi. In an och1 mnn1 mnn4 mutant strain of S.cerevisiae, proteins glycosylated with Man.sub.8GlcNAc.sub.2 accumulate and hypermannosylation does not occur. However, Man.sub.8GlcNAc.sub.2 is not a substrate for mammalian glycosyltransferases, such as human UDP-GlcNAc transferase I, and accordingly, the use of that mutant strain, in itself, is not useful for producing mammalian-like proteins, i.e., with complex or hybrid glycosylation patterns.

Detail Description Paragraph - DETX (59):
[0176] Accordingly, some or all of the Man.sub.5GlcNAc.sub.2 produced by the selected host cell must be a productive substrate for enzyme activities along a mammalian glycosylation pathway, e.g., can serve as a substrate for a GlcNAc transferase I activity in vivo, thereby forming the human-like N-glycan intermediate GlcNAcMan.sub.5GlcNAc.sub.2 in the host cell. In a preferred embodiment, at least 10%, more preferably at least 30% and most preferably 50% or more of the Man.sub.5GlcNAc.sub.2 intermediate produced in the host cell of the invention is a productive substrate for GnTI in vivo. It is understood that if, for example, GlcNAcMan.sub.5GlcNAc.sub.2 is produced at 10% and Man.sub.5GlcNAc.sub.2 is produced at 25% on a target protein, that the total amount of transiently produced Man.sub.5GlcNAc.sub.2 is 35% because GlcNAcMan.sub.5GlcNAc.sub.2 is a product of Man.sub.5GlcNAc.sub.2.

Detail Description Paragraph - DETX (447):
[0564] Lower eukaryotes that are able to produce glycoproteins having the attached N-glycan Man.sub.5GlcNAc.sub.2 are particularly useful because (a) lacking a high degree of mannosylation (e.g. greater than 8 mannoses per N-glycan, or especially 30-40 mannoses), they show reduced immunogenicity in humans; and (b) the N-glycan is a substrate for further glycosylation reactions to fomn an even more human-like glycoform, e.g., by the action of GlcNAc transferase I (FIG. 1B; .beta.1,2 GnTI) to form GlcNAcMan.sub.5GlcNAc.sub.2. A yield is obtained of greater than 30 mole %, more preferably a yield of 50-100 mole %, glycoproteins with N-glycans having a Man.sub.5GlcNAc.sub.2 structure. In a preferred embodiment, more than 50% of the Man.sub.5GlcNAc.sub.2 structure is shown to be a substrate for a GnTI activity and can serve as such a substrate in vivo.

Detail Description Paragraph - DETX (570):
[0687] Examples of modifications to glycosylation which can be affected using a method according to this embodiment of the invention are: (1) engineering a eukaryotic host cell to trim mannose residues from

Man.sub.8GlcNAc.sub.2 to yield a Man.sub.5GlcNAc.sub.2 N-glycan; (2) engineering eukaryotic host cell to add an N-acetylglucosamine (GlcNAc) residue to Man.sub.5GlcNAc.sub.2 by action of GlcNAc transferase 1; (3) engineering a eukaryotic host cell to functionally express an enzyme such as an N-acetylglucosaminyl Transferase (GnTI, GnTII, GnTIII, GnTIV, GnTV, GnTVI), mannosidase II, fucosyltransferase (FT), galactosyl tranferase (GalT) or a sialyltransferase (ST).

Detail Description Paragraph - DETX (638):

[0739] A portion of the gene encoding human N-acetylglucosaminyl Transferase] (MGATI, Accession# NM002406), lacking the first 154 bp, was amplified by PCR using oligonucleotides 5'-TGGCAGGCGCGCCTCAGTCAGCGCTCTCG-- 3' (SEQ ID NO: 43) and 5'-AGGTTAATTA AGTGCTAATTCCAGCTAGG-3' (SEQ ID NO: 44) and vector pHG4.5 (ATCC# 79003) as template. The resulting PCR product was cloned into pCR2.1-TOPO and the correct sequence was confirmed. Following digestion with AscI and PacI the truncated GnTI was inserted into plasmid pJN346 to create pNA. After digestion of pJN271 with NotI and AscI, the 120 bp insert was ligated into pNA to generate an in-frame fusion of the MNN9 transmembrane domain with the GnTI, creating pNA 15.

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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 10:01:22 ON 22 FEB 2005

=> fil .bec
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 10:01:43 ON 22 FEB 2005
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s polylactosamine
FILE 'MEDLINE'
L1          183 POLYLACTOSAMINE

FILE 'SCISEARCH'
L2          191 POLYLACTOSAMINE

FILE 'LIFESCI'
L3           40 POLYLACTOSAMINE

FILE 'BIOTECHDS'
L4            6 POLYLACTOSAMINE

FILE 'BIOSIS'
L5          185 POLYLACTOSAMINE

FILE 'EMBASE'
L6          159 POLYLACTOSAMINE

FILE 'HCAPLUS'
L7          205 POLYLACTOSAMINE

FILE 'NTIS'
L8            1 POLYLACTOSAMINE

FILE 'ESBIOBASE'
L9           97 POLYLACTOSAMINE

FILE 'BIOTECHNO'
L10         113 POLYLACTOSAMINE

FILE 'WPIDS'
L11          14 POLYLACTOSAMINE

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FILE 'LIFESCI'
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L33           6 L21 NOT 2000-2005/PY

FILE 'BIOTECHNO'
        491187 2000-2005/PY
L34           7 L22 NOT 2000-2005/PY

FILE 'WPIDS'
       4551917 2000-2005/PY
L35           0 L23 NOT 2000-2005/PY

TOTAL FOR ALL FILES
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PROCESSING COMPLETED FOR L36
L37           13 DUP REM L36 (53 DUPLICATES REMOVED)

=> d tot

L37  ANSWER 1 OF 13      MEDLINE on STN                    DUPLICATE 1
TI   Purification and characterization of UDP-GlcNAc:Galbeta1-4GlcNAcbeta1-
     3*Galbeta1-4Glc(NAc)-R(GlcNAc to *Gal) beta1,6N-
     acetylglucosaminyltransferase from hog small intestine.
SO   Journal of biological chemistry, (1998 Oct 16) 273 (42) 27625-32.
     Journal code: 2985121R. ISSN: 0021-9258.
AU   Sakamoto Y; Taguchi T; Tano Y; Ogawa T; Leppanen A; Kinnunen M; Aitio O;
     Parmanne P; Renkonen O; Taniguchi N
AN   1998438542      MEDLINE

L37  ANSWER 2 OF 13      MEDLINE on STN                    DUPLICATE 2
TI   Biosynthesis of branched polylactosaminoglycans. Embryonal carcinoma cells
     express midchain beta1,6-N-acetylglucosaminyltransferase activity that
     generates branches to preformed linear backbones.
SO   Journal of biological chemistry, (1998 Jul 10) 273 (28) 17399-405.
     Journal code: 2985121R. ISSN: 0021-9258.
AU   Leppanen A; Zhu Y; Maaheimo H; Helin J; Lehtonen E; Renkonen O
AN   1998316297      MEDLINE

L37  ANSWER 3 OF 13      MEDLINE on STN                    DUPLICATE 3
TI   Structural and functional consequences of an N-glycosylation mutation
     (HEMPAS) affecting human erythrocyte membrane glycoproteins.
SO   Biochemistry and cell biology = Biochimie et biologie cellulaire, (1998)
     76 (5) 823-35.
     Journal code: 8606068. ISSN: 0829-8211.
AU   Kameh H; Landolt-Marticorena C; Charuk J H; Schachter H; Reithmeier R A
AN   1999280184      MEDLINE

L37  ANSWER 4 OF 13      MEDLINE on STN                    DUPLICATE 4
TI   Synthesis of a new nanomolar saccharide inhibitor of lymphocyte adhesion:
     different polylactosamine backbones present multiple sialyl Lewis x
     determinants to L-selectin in high-affinity mode.
SO   Glycobiology, (1997 Jun) 7 (4) 453-61.
     Journal code: 9104124. ISSN: 0959-6658.
AU   Renkonen O; Toppila S; Penttila L; Salminen H; Helin J; Maaheimo H;
     Costello C E; Turunen J P; Renkonen R
AN   97328287      MEDLINE
```

L37 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Polymer support synthesis of oligosaccharide
SO RIKEN Review (1997), 15, 41-42
CODEN: RIREE6; ISSN: 0919-3405
AU Ito, Yukishige
AN 1997:701023 HCAPLUS
DN 127:319145

L37 ANSWER 6 OF 13 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 5
TI Solid phase **synthesis** of **polylactosamine** oligosaccharide
SO BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, (3 DEC 1996) Vol. 6, No. 23, pp. 2841-2846.
Publisher: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD, ENGLAND OX5 1GB.
ISSN: 0960-894X.
AU Shimizu H; Ito Y (Reprint); Kanie O; Ogawa T
AN 97:5726 SCISEARCH

L37 ANSWER 7 OF 13 MEDLINE on STN DUPLICATE 6
TI Biosynthesis in vitro of neolactotetraosylceramide by a galactosyltransferase from mouse T-lymphoma: purification and kinetic studies; **synthesis** of neolacto and **polylactosamine** core.
SO Glycoconjugate journal, (1996 Jun) 13 (3) 423-32.
Journal code: 8603310. ISSN: 0282-0080.
AU Basu M; Weng S A; Tang H; Khan F; Rossi F; Basu S
AN 96375684 MEDLINE

L37 ANSWER 8 OF 13 MEDLINE on STN DUPLICATE 7
TI Hydrophobic glycosides of N-acetylglucosamine can act as primers for **polylactosamine synthesis** and can affect glycolipid **synthesis** in vivo.
SO Biochemical journal, (1995 May 1) 307 (Pt 3) 791-7.
Journal code: 2984726R. ISSN: 0264-6021.
AU Neville D C; Field R A; Ferguson M A
AN 95260307 MEDLINE

L37 ANSWER 9 OF 13 MEDLINE on STN DUPLICATE 8
TI Biosynthetic mechanisms for the addition of polylactosamine to chondrocyte fibromodulin.
SO Journal of biological chemistry, (1993 Dec 15) 268 (35) 26634-44.
Journal code: 2985121R. ISSN: 0021-9258.
AU Plaas A H; Wong-Palms S
AN 94075357 MEDLINE

L37 ANSWER 10 OF 13 MEDLINE on STN DUPLICATE 9
TI Increased UDP-GlcNAc:Gal beta 1-3GaLNAc-R (GlcNAc to GaLNAc) beta-1, 6-N-acetylglucosaminyltransferase activity in metastatic murine tumor cell lines. Control of **polylactosamine synthesis.**
SO Journal of biological chemistry, (1991 Jan 25) 266 (3) 1772-82.
Journal code: 2985121R. ISSN: 0021-9258.
AU Yousefi S; Higgins E; Daoling Z; Pollex-Kruger A; Hindsgaul O; Dennis J W
AN 91107680 MEDLINE

L37 ANSWER 11 OF 13 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 10
TI **SYNTHESIS** OF **POLYLACTOSAMINE** OLIGOMERS BY DISACCHARIDE POLYMERIZATION
SO JOURNAL OF CARBOHYDRATE CHEMISTRY, (1991) Vol. 10, No. 5, pp. 927-933.
AU SRIVASTAVA G; HINDSGAUL O (Reprint)
AN 91:617407 SCISEARCH

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L37  ANSWER 12 OF 13     MEDLINE on STN                  DUPLICATE 11
TI   Defective glycosylation of erythrocyte membrane glycoconjugates in a
     variant of congenital dyserythropoietic anemia type II: association of low
     level of membrane-bound form of galactosyltransferase.
SO   Blood, (1989 Apr) 73 (5) 1331-9.
     Journal code: 7603509. ISSN: 0006-4971.
AU   Fukuda M N; Masri K A; Dell A; Thonar E J; Klier G; Lowenthal R M
AN   89194384     MEDLINE

L37  ANSWER 13 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
TI   Synthesis of an octasaccharide fragment of the polylactosamine series by a
     blockwise approach
SO   Tetrahedron Letters (1987), 28(29), 3345-8
     CODEN: TELEAY; ISSN: 0040-4039
AU   Alais, Jocelyne; Veyrieres, Alain
AN   1988:204947  HCAPLUS
DN   108:204947


=> s l12 and enzym?(5a)synthes?
FILE 'MEDLINE'
       1088027 ENZYM?
        474523 SYNTHES?
         18706 ENZYM?(5A)SYNTHES?
L38         10 L1 AND ENZYM?(5A)SYNTHES?

FILE 'SCISEARCH'
        514957 ENZYM?
        835090 SYNTHES?
         17742 ENZYM?(5A)SYNTHES?
L39         10 L2 AND ENZYM?(5A)SYNTHES?

FILE 'LIFESCI'
        218721 ENZYM?
        135609 SYNTHES?
          7278 ENZYM?(5A)SYNTHES?
L40          1 L3 AND ENZYM?(5A)SYNTHES?

FILE 'BIOTECHDS'
        124555 ENZYM?
         30857 SYNTHES?
          3725 ENZYM?(5A)SYNTHES?
L41          2 L4 AND ENZYM?(5A)SYNTHES?

FILE 'BIOSIS'
       1752551 ENZYM?
        623184 SYNTHES?
         27621 ENZYM?(5A)SYNTHES?
L42         10 L5 AND ENZYM?(5A)SYNTHES?

FILE 'EMBASE'
        815562 ENZYM?
        578222 SYNTHES?
         27095 ENZYM?(5A)SYNTHES?
L43         11 L6 AND ENZYM?(5A)SYNTHES?

FILE 'HCAPLUS'
       1042195 ENZYM?
       1426297 SYNTHES?
         39277 ENZYM?(5A)SYNTHES?
L44         11 L7 AND ENZYM?(5A)SYNTHES?

FILE 'NTIS'
         12771 ENZYM?
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         41917 SYNTHES?
           376 ENZYM?(5A)SYNTHES?
L45          0 L8 AND ENZYM?(5A)SYNTHES?

FILE 'ESBIOBASE'
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        178156 SYNTHES?
         10162 ENZYM?(5A)SYNTHES?
L46          9 L9 AND ENZYM?(5A)SYNTHES?

FILE 'BIOTECHNO'
        366038 ENZYM?
        170699 SYNTHES?
         13572 ENZYM?(5A)SYNTHES?
L47          6 L10 AND ENZYM?(5A)SYNTHES?

FILE 'WPIDS'
         85178 ENZYM?
        121788 SYNTHES?
          1661 ENZYM?(5A)SYNTHES?
L48          2 L11 AND ENZYM?(5A)SYNTHES?

TOTAL FOR ALL FILES
L49         72 L12 AND ENZYM?(5A) SYNTHES?

=> s l49 not 2000-2005/py
FILE 'MEDLINE'
       2757088 2000-2005/PY
L50          8 L38 NOT 2000-2005/PY

FILE 'SCISEARCH'
       5175630 2000-2005/PY
L51          8 L39 NOT 2000-2005/PY

FILE 'LIFESCI'
        518247 2000-2005/PY
L52          1 L40 NOT 2000-2005/PY

FILE 'BIOTECHDS'
        107530 2000-2005/PY
L53          2 L41 NOT 2000-2005/PY

FILE 'BIOSIS'
       2649692 2000-2005/PY
L54          7 L42 NOT 2000-2005/PY

FILE 'EMBASE'
       2400345 2000-2005/PY
L55          8 L43 NOT 2000-2005/PY

FILE 'HCAPLUS'
       5178728 2000-2005/PY
L56          8 L44 NOT 2000-2005/PY

FILE 'NTIS'
         80993 2000-2005/PY
L57          0 L45 NOT 2000-2005/PY

FILE 'ESBIOBASE'
       1487445 2000-2005/PY
L58          7 L46 NOT 2000-2005/PY

FILE 'BIOTECHNO'
        491187 2000-2005/PY
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L59          5 L47 NOT 2000-2005/PY

FILE 'WPIDS'
       4551917 2000-2005/PY
L60          0 L48 NOT 2000-2005/PY

TOTAL FOR ALL FILES
L61         54 L49 NOT 2000-2005/PY

=> log y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                     46.96      47.17

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